



PLANOFLEX

NGFLGOEU
Flat Festoon Cable

ENERGY



Technical Data

	Type	PLANOFLEX
	Type designation	NGFLGOEU-J/-O
	Approvals/ standards	DIN VDE 0250, Part 809, UL-File E 113313; GOST R
	Application	Flexible power and control cable, for use on festoon systems and for connecting moveable parts of machine tools, material handling equipment, etc., associated with high mechanical stresses and frequent bending during operation and for bending in one plane only.
Electrical parameters	Rated voltage	U ₀ /U = 300/500V (600V)
	Maximum permissible operating voltage in AC systems	U ₀ /U = 0.7/1.2 kV
	Maximum permissible operating voltage in DC systems	U ₀ /U = 0.9/1.8 kV
	AC factory test voltage:	2.5kV, 5 min
	Current-carrying capacity	According to DIN VDE 0298, Part 4
Thermal parameters	Ambient temperature	
	- Fully flexible operation	-35°C to +80°C
	- Fixed installation	-50°C to +80°C
	Maximum permissible operating temperature of the conductor	90°C
	Short-circuit temperature of the conductor	250°C
Mechanical parameters	Tensile load	Up to 15 N/mm ²
	Torsional stresses	Not permitted
	Minimum bending radii	According to DIN VDE 0298, Part 3
	Minimum distance with S-type directional changes	No application
	Travel speed	
	- Gantry (reeling operation)	No application
	- Trolley (festoon system)	Guidance value: up to 180m/min It is recommended to consult the manufacturer for speeds beyond 180m/min
	Additional tests	Bending test
Chemical parameters	Resistance to oil	DIN VDE 0473, Part 811-2-1, Para. 10
	Weather resistance	Unrestricted use outdoors and indoors, resistant to ozone, UV and moisture



Design features

Type	PLANOFLEX
Conductor (refer also DIN VDE 0295)	Electrolytic copper, not tinned Up to 25 mm²: extremely finely stranded, class 6 Above 35 mm²: finely stranded, class 5
Insulation (refer also to DIN VDE 0207, Part 20)	PROTOLON Basic material EPR Rubber compound 3GI3
Shield for individually shielded cores and twisted and shielded pairs	Braid screen made of tinned copper wires, transfer impedance optimized at 30 MHz. Surface covered: approx. 60% for shielded cores, approx. 80% for twisted and shielded pairs
Core identification (in line with DIN VDE 0293)	Up to 5 cores, colored: green/yellow (or black for version...-O) black, blue, brown, grey; For more than 5 cores: black with white colored numbers
Core arrangement	Parallel, for more than 12 cores: parallel bundles
Outer sheath (refer also to DIN VDE 0207, Part 21)	Basic material CR Rubber compound 5GM3 Colour: black
Marking	<VDE>PLANOFLEX NGFLGOEU-J/-O (number of cores)x(cross-section) 600V, 90°C, (UL), PLANOFLEX (cross-section) AWG/(number of cores)(type of core) OUTDOOR

Selection and ordering data

Number of cores and nominal cross-section	Order No.	Conductor diameter	Overall diameter of cable Min. value	Overall diameter of cable Max. value	Approx. net weight for 1000 m	Maximum permissible tensile force
		[mm]	[mm]	[mm]	[kg/km]	[N]
(N)GFLGOEU-J control cables						
3x1,5	5DG5 751	1,5	5,5x11,7	6,0x12,5	126	68
4x1,5	5DG5 711	1,5	5,7x15,0	6,2x15,8	171	90
5x1,5	5DG5 712	1,5	5,5x18,5	6,0x20,1	214	113
7x1,5	5DG5 714	1,5	5,5x25,0	6,0x26,8	292	158
8x1,5	5DG5 715	1,5	5,5x27,5	6,0x28,3	325	180
10x1,5	5DG5 717	1,5	6,2x35,5	6,7x37,0	455	225
12x1,5	5DG5 718	1,5	6,3x42,0	6,8x43,5	550	270
24x1,5	5DG5 720	1,5	11,3x50,5	12,1x52,7	1050	540
4x2,5	5DG5 721	2,0	6,8x18,6	7,4x19,6	257	150
5x2,5	5DG5 722	2,0	6,8x22,9	7,4x24,6	332	188
7x2,5	5DG5 724	2,0	6,8x31,0	7,4x32,8	452	263
8x2,5	5DG5 725	2,0	6,8x34,1	7,4x35,9	510	300
10x2,5	5DG5 727	2,0	7,4x43,0	7,9x45,3	660	375
12x2,5	5DG5 728	2,0	7,0x50,6	8,0x53,5	810	450
24x2,5	5DG5 730	2,0	15,0x68,6	15,8x69,2	1730	900
(N)GFLGOEU-J power cables						
4x4	5DG5 731	2,8	8,5x23,0	9,0x24,0	402	240
4x6	5DG5 741	3,5	9,1x25,5	9,6x27,0	510	360
4x10	5DG5 765	4,5	10,5x31,3	11,3x32,8	770	600
4x16	5DG5 766	5,6	12,2x36,1	13,0x37,6	1160	960
4x25	5DG5 767	6,6	13,7x42,3	14,5x43,8	1560	1500
4x35	5DG5 768	8,1	15,8x48,8	16,8x50,3	2100	2100
4x50	5DG5 770	9,7	18,3x57,0	19,3x59,0	2930	3000
4x70	5DG5 771	11,2	20,5x64,0	21,5x66,0	3910	4200
4x95	5DG5 772	13,1	23,5x74,2	24,5x76,2	5120	5700
4x120	5DG5 773	15,0	24,2x79,2	27,2x83,2	6110	7200
5x4	5DG5 732	2,8	8,5x28,9	9,0x31,2	510	300
5x6	5DG5 742	3,5	9,1x31,8	9,6x39,1	640	450
5x10	5DG5 687	4,5	10,5x39,2	11,3x41,6	960	750
5x16	5DG5 776	5,6	12,2x45,1	12,7x47,6	1370	1200
7x4	5DG5 734	2,8	8,5x38,5	9,0x40,9	720	420
7x6	5DG5 744	3,5	9,1x42,9	9,6x45,3	910	630
7x10	5DG5 865	4,5	10,5x53,0	11,3x55,9	1370	1050
7x16	5DG5 866	5,6	12,6x60,7	13,4x63,9	1990	1680
7x25	5DG5 867	6,6	14,9x73,3	15,7x76,6	2930	2625
7x35	5DG5 868	8,1	16,4x83,7	17,4x87,0	3820	3675
(N)GFLGOEU-O control cables with individually shielded cores						
12x1(C)	5DG5 670	1,3	6,6x48,2	7,1x51,3	653	180
4x1,5(C)	5DG5 880	1,5	6,9x18,5	7,4x19,5	250	90
8x1,5(C)	5DG5 884	1,5	6,9x35,1	7,4x35,1	510	180
12x1,5(C)	5DG5 888	1,5	7,5x51,8	8,0x55,6	820	270
(N)GFLGOEU-O bus cables						
4x(2x1)C	5DG5 890	1,3	10,6x31,8	11,4x33,8	663	120
6x(2x2,5)C	5DG5 898	2,0	14,8x61,5	15,6x65,1	1800	450
7x(2x1)C	5DG5 893	1,3	10,5x53,1	11,4x56,0	1100	210

Selection and ordering data

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		[mm]	[mm]	[mm]	[kg/km]	[N]
(N)GFLGOEU-J power cables with individual screen						
4x1,5(C)	5DG5 880	1,5	6,9x18,5	7,4x19,5	250	90
4x4(C)	5DG5 4857	2,8	9,2x26,3	10,2x29,3	550	240
4x6(C)	5DG5 4857	3,5	9,5x28,8	11,1x31,8	665	360
4x10(C)	5DG5 4867	4,5	11,7x36,0	13,3x39,0	1060	600
4x16(C)	5DG5 4877	5,6	12,8x40,2	14,4x43,2	1360	960
4x25(C)	5DG5 4887	6,6	14,8x47,3	16,8x50,3	1980	1500
4x35(C)	5DG5 4897	8,1	16,9x53,4	18,9x57,4	2590	2100
4x50(C)	5DG5 4907	9,7	19,5x62,0	21,5x66,0	3590	3000
4x70(C)	5DG5 4917	11,2	21,9x69,8	23,9x73,8	4630	4200
4x95(C)	5DG5 4927	13,1	24,2x78,7	27,2x83,7	5950	5700